

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 2 and 7 have been amended. Claims 11-13 have been canceled. Claims 1-10 are pending.

Claim objections

Claims 5 and 10 were objected to for informalities. Specifically, the Office Action stated on page 2 that in claims 5 and 10 “the light from the light source is not effectively used when a predetermined light distribution pattern for a low beam is formed’ contains a negative limitation which does not have basis in the original disclosure and fails to comply with the written description requirement.” Applicants respectfully disagree. Support for the limitation of “the light from the light source is not effectively used when a predetermined light distribution pattern for a low beam is formed” can be found in the present specification at least in the bridging paragraph on pages 17-18, and in the paragraph on page 18, lines 3-10.

Rejections under 35 U.S.C. § 103

Claims 1-3 and 6-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,697,225 to Lindae et al. (“Lindae”). Claims 4-5 and 9-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lindae, and further in view of U.S. Patent No. 4,972,307 to Takatsuji et al. (“Takatsuji”). Applicants respectfully traverse these rejections for at least the following reasons.

Independent claims 1 and 6 each recite that “the reflection surface includes a plurality of segments, and is formed of a free-form surface obtained by deforming a reference ellipsoid of revolution.” Lindae and Takatsuji fail to disclose or suggest at least this feature of claim 1, or the advantages thereof.

Lindae does not disclose the reflection surface as recited in claims 1 and 6. The Office Action cites to Lindae at col. 1, lines 48-63 as disclosing a reflection surface that is

formed of a free-form surface obtained by deforming a reference ellipsoid of revolution. The cited section of Lindae, however, discloses that portions (upper right hand wall portion and lower left hand wall portion) of its reflector are for a paraboloid-ellipsoid sector. Thus, Lindae merely discloses a reflector which includes portions that are paraboloid-ellipsoid in shape, but does not suggest that these portions are formed of a free-form surface obtained by deforming a reference ellipsoid of revolution. Thus, Lindae fails to disclose the reflection surface as recited in claims 1 and 6.

Takatsuji was cited for allegedly disclosing a headlamp with a diffuse reflection surface, but fails to cure the deficiencies of Lindae.

Moreover, the headlamps of claims 1 and 6, with their specifically recited reflection surfaces, would not have been obvious in view of Lindae. Lindae not only does not disclose or suggest a reflection surface formed of a free-form surface obtained by deforming a reference ellipsoid of revolution, Lindae provides no guidance as how to proceed in deforming a reference ellipsoid of revolution in order to arrive at a reflectance surface having the properties as recited in claims 1 and 6. Lindae discloses nothing regarding deforming a reference ellipsoid of revolution, and claims 1 and 6 are patentable thereover for at least this reason.

Independent claims 2 and 7 contain all the limitations of independent claims 1 and 6, respectively, and thus are patentable for analogous reasons. Moreover, both claims 2 and 7 recite “a first continuous segment that forms diffused light at a center portion of the light distribution pattern; a second continuous segment that forms spot light at the center portion” (emphasis added). Lindae fails to suggest this feature of claims 2 and 7, or its advantages in simplicity of design. The Office Action equates portions 15 and 16 of Lindae with the first segment as recited, and portions 11 and 12 of Lindae with the second segment as recited. As can be readily seen in the Lindae Figure, however, portions 11 and 12 do not form a continuous segment, nor do portions 15 and 16. The reflector design as recited in claims 2 and 7 beneficially requires fewer segments than that of Lindae.

The dependent claims are patentable for at least the same reasons as their respective independent claims, as well as for further patentable features recited therein. For example, claims 5 and 10 recite “a portion of the diffuse reflection surface, where the light from the light source is not effectively used when a predetermined light distribution pattern for a low beam is formed, includes a luminous intensity-improving reflection surface that increases luminous intensity at the one end and the other end portions formed substantially in a rectangular shape by the wide area-illuminating reflection surface” (emphasis added). Lindae fails to disclose or suggest this feature. With regards to this feature, the Office Action states on page 6 that it would have been obvious to have modified segments of Lindae as a luminous intensity-improving reflection surface. The Office Action, however, fails to provide any reference including a reflector with a luminous intensity-improving reflection surface, much less motivation to include such a surface in the device of Lindae.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date December 16, 2005

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